

EARLY SUCCESSIONAL HABITATS: OLD FIELD AND EARLY WOODLANDS.

Early succession plant communities produce an abundance of highly nutritious seed and forage sought after by many kinds of wildlife. Various ground-nesting birds and other wildlife require early succession habitats for reproduction, and without these habitats they vanish from the landscape. Across the nation, the single category of wildlife experiencing the most decline are those that depend on natural early succession habitats. Some wildlife species benefit from early succession habitats, but also occupy other habitats. If early succession habitats are not available, these animals survive with a lessened capacity or quality of life.

Restoration and Creation

A disturbance that develops bare ground exposed to sunlight, such as logging, burning, or disking, sets the natural process in motion for early succession plants to flourish. Restoration and Management of old field is aimed at retaining some grasses and primarily herbaceous cover, mixed with shrubby plants and some hardwood and softwood seedlings and saplings. Within the forest environment, disturbed areas stimulate the growth of shrubs, seedlings and saplings with herbaceous grass and cover.

Practice Component	Cost Share/Max Reimbursement ¹		
Maintenance and restoration	75%	Flat Rate	Max
Brush Hogging		\$85/acre	
Contract Grazing ²	X		\$400/acre
Mowing		\$65/acre	
Heavy Chipping	X		\$1500/acre
Control of Invasive Plants ³	75%	Flat Rate	Max
Mechanical and Chemical Control			
> 50% Invasive/exotic plant density	X		\$400/acre
< 50% Invasive/exotic plant density	X		\$300/acre
Biological Control	X		\$5000/acre
Contract Grazing ²	X		\$400/acre
Other Control Strategies	rates subject to practice		
Prescribed Burning ⁴	75%	Flat Rate	Max
Fuel Reduction- mowing and/or logging	X		\$200/acre
Site Preparation- fire break, etc.	X		\$500/acre
Other Practices and their Rates will be discussed as needed ⁵			

¹Rates can be included as an in-kind contribution

²Contract grazing is allowed on sites that are not conducive to the use of machinery and or chemicals.

Price includes portable fence, animal transport and caretaker.

³Invasive plant control is intended to treat sites where success of control is highly likely.

⁴Prescribed burning frequency is determined by management goals and results of monitoring fire effects.

⁵Other practices may be funded. Consultation with LIP Coordinator is needed to authorize work.

EARLY SUCCESSIONAL HABITATS: GRASSLANDS

Without regular maintenance to set back succession, these fields will proceed from a mixed stand of grasses and forbs with no woody vegetation to a shrubland dominated by woody shrubs and saplings and eventually to forest. Large areas of grassland are important habitat for migratory birds, small mammals and insects. Early successional grasslands habitats are influenced by agricultural history, moisture, and soils.

Restoration and Creation

Some of the most productive grassland habitats within the region are fallow agricultural fields in the early stages of old field succession. Grassland restoration and management is aimed at developing and/or maintaining large areas of native grassland in both cool and warm seasons.

Practice Component	Cost Share/Max Reimbursement ¹		
Maintenance and restoration	75%	Flat Rate	Max
Brush Hogging		\$85/acre	
Contract Grazing ²	X		\$400/acre
Mowing		\$65/acre	
Prescribed Burning ³	75%	Flat Rate	Max
Fuel Reduction- mowing and/or logging	X		\$200/acre
Site Preparation- fire breaks, etc.	X		\$500/acre
Seeding of Warm/Cold Season Grasses	75%	Flat Rate	Max
Native Warm Season Grasses Includes seedbed prep and soil amendment		\$600/acre	
Native Cold Season Grasses Includes seedbed prep and soil amendment		\$300/acre	
Soil Amendment	75%	Flat Rate	Max
Liming and fertilizing		\$100/acre	
Control of Invasive Plants ⁴	75%	Flat Rate	Max
Mechanical and Chemical Control			
> 50% Invasive/exotic plant density	X		\$400/acre
< 50% Invasive/exotic plant density	X		\$300/acre
Biological Control	X		\$5000/acre
Contract Grazing ²	X		\$400/acre
Other Control Strategies	rates subject to practice		
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WOODLAND HABITATS: HARD AND SOFT WOOD FORESTS.

Most woodland communities consist of three main layers: the canopy; the middle-story and the under-story or ground layer. The canopy layer is typically moderately dense and allows light to penetrate, resulting in well-developed and richly diversified understory vegetation and stratification of animals. Typically the forest is characterized by 3-4 tree species per square kilometer. Deciduous trees are distinguished by broad leaves that are lost annually and include such species as oak, hickory, beech, hemlock, maple, basswood, cottonwood, elm, willow, and spring-flowering herbs. In most coniferous woodlands, evergreen conifers predominate, while some are a mix of conifers and broadleaf evergreen trees and/or broadleaf deciduous trees. These habitats support a wide variety of wildlife. Wildlife populations shift in response to changes in stand age, structure, size, and species composition. As a result, the assemblage of wildlife species inhabiting the forest typically shifts as the stand moves through each successional stage

Restoration and Management

Forested areas can be managed with a wide variety of objectives, ranging from the generation of wood products or thinning an overgrown woodland, to increasing/creating wildlife habitat. Management should be aimed to amplify native forest habitat, and to provide food and cover to target wildlife species.

Practice Component	Cost Share/Max Reimbursement ¹		
Woodland Improvement	75%	Flat Rate	Max
Cutting or Girdling low economic/habitat value trees	X		\$200/acre
Tree Planting	75%	Flat Rate	Max
Seedlings of desirable species, tree protectors, nutrients and labor	\$5 per tree		
Mast tree release	75%	Flat Rate	Max
Removal of surrounding undesirable trees		\$10/tree	
Control of Invasive Plants ²	75%	Flat Rate	Max
Mechanical and Chemical Control			
> 50% Invasive/exotic plant density	X		\$400/acre
< 50% Invasive/exotic plant density	X		\$300/acre
Biological Control	X		\$5000/acre
Contract Grazing	X		\$400/acre
Other Control Strategies	rates subject to practice		
Other Practices and their Rates will be discussed as needed ³			

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XERIC FORESTS: PINE BARRENS

Pine Barrens are underlain by sandy, nutrient poor soils that typically support a forest dominated by pitch pine (*Pinus rigida*) and scrub oaks (*Quercus ilicifolia*, *Q. prinoides*) and tree oaks maintained by periodic fires. Hydrology, soils, disturbance regimes, and vegetation combine to separate these habitats from surrounding units. In particular, fire regimes and sandy, droughty soils distinguish these communities from surrounding forest types. Many sites require mowing and/or logging prior to conducting prescribed burns to reduce fire intensity and severity. Pitch pine/scrub oak barrens support an array of regionally rare moths and butterflies and declining bird species. These species depend on structural characteristics of vegetation that are lost in the absence of fire or mowing. Montague Plains is the largest inland (1500 acres) example of this habitat in the State and barrens are the dominant vegetation type in southeastern Massachusetts. Many fire dependent systems have been deprived of fire for decades creating highly dangerous fuel loads which could support catastrophic fires. Xeric forests often surround coastal plain ponds, an important habitat for dozens of rare species. Early accounts suggest that much of southern New England supported xeric forests under the influence of frequent fire.

Restoration and Creation

Restoration will be aimed at rehabilitating degraded pitch-pine, oak plant communities. Management techniques that mimic natural disturbance events will be favored.

Practice Component	Cost Share/Max Reimbursement ¹		
Prescribed Burning ²	75%	Flat Rate	Max
Fuel Reduction- mowing and/or logging	X		\$200/acre
Site Preparation- fire breaks, etc.	X		\$500/acre
Planting of Native Plants	75%	Flat Rate	Max
pitch pine, scrub oak, wild lupine, etc	X		\$1000/acre
Control of Invasive Plants ³	75%	Flat Rate	Max
Mechanical and Chemical Control			
> 50% Invasive/exotic plant density	X		\$400/acre
< 50% Invasive/exotic plant density	X		\$300/acre
Biological Control	X		\$5000/acre
Contract Grazing ⁴	X		\$400/acre
Other Control Strategies	rates subject to practice		
Other Practices and their Rates will be discussed as needed ⁵			

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